

EXHIBIT C

UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK

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UNITED STATES OF AMERICA

- v. -

S8 15 Cr. 536 (PGG)

KALEIL ISAZA TUZMAN,

Defendant.

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EXPERT REPORT OF PROFESSOR ALLEN FERRELL

I. QUALIFICATIONS

1. I am the Greenfield Professor of Securities Law at Harvard Law School, where I have taught since 1998, and I am an Academic Affiliate of Compass Lexecon, an economics consulting firm.¹ I received a Ph.D. in economics from the Massachusetts Institute of Technology with fields in econometrics and finance and a J.D. from Harvard Law School. My Ph.D. thesis concerned the relationship between stock prices and financial disclosures. After law school I clerked for Judge Silberman of the United States Court of Appeals for the D.C. Circuit and Justice Kennedy of the Supreme Court of the United States.

2. In addition to holding the Greenfield chair at the Harvard Law School, I am also a faculty associate at the Kennedy School of Government at Harvard, a fellow at Columbia University's Program on the Law and Economics of Capital Markets, a research associate at the European Corporate Governance Institute, and a member of the editorial board of the Journal of Financial Perspectives. I formerly was a member of the Board of Economic Advisors to the Financial Industry Regulatory Authority ("FINRA"), an academic fellow at FINRA, the ABA Task Force on Corporate Governance, American Law Institute Project on the Application of U.S. Financial Regulations to Foreign Firms and Cross-Border Transactions, and an executive member of the American Law School section on securities regulation. I was also Chairperson of Harvard's Advisory Committee on Shareholder Responsibility (which is responsible for advising the Harvard Corporation on how to vote shares held by its endowment).

3. I have testified before the U.S. Senate Subcommittee on Securities, Insurance and Investment and presented to, among others, the Securities and Exchange Commission, the World Bank, International Monetary Fund, the Structured Products Association and the National Bureau of Economic Research. I have published approximately

¹ My curriculum vitae, which describes my education, academic and professional experience is attached as Exhibit A.

thirty articles in leading journals in the general area of law and finance, including on the use of event studies and the estimation of price impact in securities litigation. I have also been an expert witness in a number of securities cases, and my work has included conducting event studies and assessing price impact and analyzing class certification issues. My testimony in the last four years and academic work are summarized on my curriculum vitae, which is attached hereto as Exhibit A.

II. ASSIGNMENT, BACKGROUND AND SUMMARY OF OPINIONS

4. I have been asked by counsel for Mr. Kaleil Isaza Tuzman to analyze and provide expert opinion testimony concerning the loss calculations in ¶¶ 151-154 of the Government's Pre-Sentencing Report (the "PSR") as they relate to Counts Four and Six of the Indictment.²

5. Count Four involves trading by Maiden Capital as part of a conspiracy to manipulate the price of KIT digital stock. The Government's estimate of the losses relating to Count Four is based on the increase in market capitalization from December 30, 2008, the day prior to the manipulation period, to September 15, 2011, the end of the manipulation period.³ This increase was then multiplied by two different estimates of the fraction of trading volume accounted for by Maiden Capital.⁴ The two resulting estimates of loss are \$25.2 million and \$11.5 million.⁵

6. Count Six relates to an accounting fraud whereby fake revenue was recorded on the books of KIT digital beginning in March 2011.⁶ The Government's estimate of the loss relating to Count Six is \$31.4 million and is based on "price declines that occurred in

2. I have not been asked to address the losses associated with Count Five.

3. PSR ¶ 151.

4. PSR ¶¶ 152-153.

5. PSR ¶¶ 152-153.

6. PSR ¶ 154.

November 2012, once KIT Digital announced to the market that there were errors and irregularities in its historical financial statements.”⁷ The PSR does not indicate whether the Government used an event study to control for market and industry factors.⁸ The price movement was then “used as a measure of inflation to estimate which investors purchased the stock at inflated prices and then sold shares subsequent to the disclosure. The inflation period was pegged as starting on March 17, 2011, when the company started reporting revenue from fake contracts.”⁹

7. I have reached the following principal conclusions:

- Other factors aside from stock manipulation affect the price of a publicly traded stock. These include market, industry and firm-specific factors. The Government’s method of calculating losses related to Count Four is flawed because it does nothing to account for these other factors.
- The Government’s method for estimating losses related to Count Six is flawed because, although an event study can identify an abnormal price movement, it cannot establish by itself which piece of information caused the price movement when there is a complex announcement.

I elaborate upon and provide the bases for these conclusions in the remainder of this report.

III. THE GOVERNMENT’S LOSS CALCULATIONS FOR COUNT FOUR FAIL TO ACCOUNT FOR OTHER FACTORS ASIDE FROM MANIPULATION THAT AFFECT THE PRICE OF A PUBLICLY TRADED STOCK, INCLUDING MARKET, INDUSTRY AND FIRM-SPECIFIC FACTORS.

8. The Government’s loss calculation associated with Count Four attributes a flat percentage of the decline in market capitalization of KIT digital (either 6.14 percent or 2.8 percent) to the manipulation.¹⁰ However the Government fails to acknowledge that the manipulation was not the only factor affecting KIT digital’s price during the period. This is

7. PSR ¶ 154.

8. PSR ¶ 154.

9. PSR ¶ 154.

10. PSR ¶¶ 152-153.

simply demonstrated by the fact that there were many days during the charged conspiracy period where Maiden Capital did not trade KIT Digital stock. Any stock price movement on those dates would not be related to Maiden's trading, but rather to other market, industry or company-specific factors. Moreover on days where Maiden Capital did trade, there may have been confounding information affecting the stock price that the Government's method does not account for, Maiden Capital may have traded only a tiny fraction of volume, or Maiden Capital's trading may have been in the opposite direction of the price movement.

9. It is well recognized that publicly traded stock prices are impacted by market and industry factors as well as company specific factors.¹¹ The Government's method of calculating losses relating to Count Four is flawed because, among other things, it fails to account for the market, industry and company-specific factors that affected KIT digital's price between December 2008 and September 2011. For example:

- Between December 31, 2008 and September 11, 2011, the S&P 500 and Russell 2000 Indexes increased 34 percent and 44 percent, respectively, as the economy emerged from the financial crisis and recession.¹²
- KIT digital had positive earnings announcement and other company-specific events.

10. Because the Government's method does nothing to identify exactly which price movements are related to manipulation or to adjust their estimate of loss for market and industry movements¹³ and other unrelated company-specific news, its loss calculation does not rely on generally accepted economic principles, and could substantially overstate the effect

11. Bradford Cornell, John I. Hirshleifer & John N. Haut, (2005), Securities Fraud Damages, in Patrick A. Gaughan, Robert J. Thornton (ed.) Developments in Litigation Economics (Contemporary Studies in Economic and Financial Analysis, Volume 87, Emerald Group Publishing Limited, at 31.

12. See, Bloomberg.

13. In calculating losses related to Count Six, the Government itself recognizes the importance of accounting for other market effects. See PSR ¶ 154.

that Maiden's trading had on the price of KIT Digital stock. Exhibit 3922 entitled "Maiden Capital Trading on Maiden and Melley Identified Dates" spanning January 2009 to September 2011, documents that none of those dates had a statistically significant stock price increase. Moreover, Exhibit B documents that the volume of Maiden's purchases constituted just 0.9 percent of the market trading volume between January 5, 2011 and September 29, 2011. The Government's calculations fail to show how this level of purchase volume during this period caused a quantifiable change in KIT Digital's stock price for purposes of its loss calculation relating to Count Four of the Indictment.

IV. THE GOVERNMENT'S METHOD FOR ESTIMATING LOSSES RELATED TO COUNT SIX IS FLAWED BECAUSE ALTHOUGH AN EVENT STUDY CAN IDENTIFY AN ABNORMAL PRICE MOVEMENT, IT CANNOT ESTABLISH BY ITSELF WHICH PIECE OF INFORMATION CAUSED THE PRICE MOVEMENT, WHEN THERE IS A COMPLEX ANNOUNCEMENT.

11. The Government's loss calculation related to Count Six is fundamentally flawed because, among other reasons, the method described, if it even adjusted for market and industry factors, only supports a conclusion that there was a price-moving event that date, but does not distinguish which piece of information is moving the price of the stock. The disclosure on November 21, 2012 was complex and included the following statements, among others:

- On November 15, 2012, the Audit Committee of the Board of Directors of KIT digital, Inc. (the "Company") concluded that, because of errors and irregularities identified by the Company in its historical financial statements, the financial statements for (1) the years ended December 31, 2009, 2010 and 2011 and (2) each of the three quarters in 2009, 2010 and 2011 will be restated.¹⁴
- The accounting errors and irregularities relate primarily to recognition of revenue related to certain perpetual software license agreements entered

14. KIT digital Form 8-K, November 21, 2012.

into by the prior management team in 2010 and 2011.¹⁵

- The Audit Committee has also determined that certain transactions entered into by the Company under the prior management team during fiscal years ended December 31, 2008 through 2011 were related party transactions and that additional disclosure with respect to those transactions should have been included in the footnotes to the relevant financial statements.¹⁶
- [A]s a result of the restatement discussed above, there is an Event of Default under the secured loan facility and the Company is in discussions with the lenders.¹⁷
- As a result of these challenges, the Company is considering a broad set of strategic alternatives including financing transactions as well as other strategic transactions including a sale of the Company or its assets. The Company continues to examine the reduction of working capital requirements to further conserve cash and may need to take additional actions in the near-term, which may include additional personnel reductions and suspension of certain development activities. The above actions may or may not prove to be consistent with the Company's long-term strategic objectives, which have shifted in the current year, as the Company discontinued certain non-core assets, among other things. No assurance can be given that the Company will be able to enter into an agreement for a sale of the Company or its assets or obtain financing on favorable terms, if at all, or to successfully further reduce costs in such a way that would continue to allow the Company to operate its business.¹⁸
- As a result of the restatement, the Company is cancelling its 2012 Annual Meeting of Stockholders.¹⁹

12. This complex announcement contained information unrelated to Count

Six. For example, the restatement covered periods prior to "March 17, 2011, when the

15. KIT digital Form 8-K, November 21, 2012.

16. KIT digital Form 8-K, November 21, 2012.

17. KIT digital Form 8-K, November 21, 2012.

18. KIT digital Form 8-K, November 21, 2012.

19. KIT digital Form 8-K, November 21, 2012.

company started reporting revenue from fake contracts.”²⁰

13. The literature states that when analyzing a complex announcement “it should be noted that the abnormal return would include the effects of the event being studied as well as any other company-specific news or events (if any) that occur in the event window. Whenever possible, the effects of these events should be disentangled.”²¹ From the disclosure in the PSR, it does not appear that the Government attempted to disentangle the stock price effects of the multiple parts of the November 2012 disclosure. This renders the loss calculation in the PSR with respect to Count Six unreliable.



Allen Ferrell

June 22, 2018

20. PSR ¶ 154.

21. David I. Tabak and Frederick C. Dunbar, “Materiality and Magnitude: Event Studies in the Courtroom,” in Litigation Services Handbook: The Role of the Financial Expert, Roman L. Weil, Michael J. Wagner & Peter B. Frank (eds.) John Wiley & Sons, at 19.6. See also, Bradford Cornell, John I. Hirshleifer & John N. Haut, (2005), “Securities Fraud Damages,” in Patrick A. Gaughan, Robert J. Thornton (eds.) Developments in Litigation Economics (Contemporary Studies in Economic and Financial Analysis, Volume 87, Emerald Group Publishing Limited, at 37-38.

EXHIBIT A

to the Ferrell Report

April, 2018

Allen Ferrell
Harvard Law School
Cambridge, Massachusetts 02138
Telephone: (617) 495-8961
Email: fferrell@law.harvard.edu

CURRENT POSITIONS

Greenfield Professor of Securities Law, Harvard Law School

National Bureau of Economic Research, Research Associate

Member of Editorial Board, Journal of Financial Perspectives

Fellow, Columbia University's Program on the Law and Economics of Capital Markets

Faculty Associate, Kennedy School of Government

Research Associate, European Corporate Governance Institute

EDUCATION

Massachusetts Institute of Technology, Ph.D. in Economics, 2005
Fields in econometrics and finance

Harvard Law School, J.D., 1995, *Magna Cum Laude*

- Recipient of the *Sears Prize* (award given to the two students with the highest grades)
- Editor, *Harvard Law Review*

Brown University, B.A. and M.A., 1992, *Magna Cum Laude*

PREVIOUS POSITIONS

Harvard University Fellow
Harvard Law School, 1997

Law Clerk, Justice Anthony M. Kennedy
Supreme Court of the United States; 1996 Term

Law Clerk, Honorable Laurence H. Silberman
United States Court of Appeals for the District of Columbia; 1995 Term

COURSES TAUGHT

Contracts
Corporate Finance
Law and Finance
Securities Litigation
Securities Regulation

REFEREE FOR FOLLOWING JOURNALS

American Law and Economics Review
Journal of Corporation Finance
Journal of Finance
Journal of Financial Perspectives
Journal of Law and Economics
Journal of Law, Economics and Organization
Journal of Legal Studies
Quarterly Journal of Economics

CONSULTING AREAS

Price Impact and Securities Damages, Valuation, Mergers & Acquisitions

Papers

“New Special Study of the Securities Markets: Intermediaries” with John Morley, paper for launch of Columbia University’s New Special Study of the Securities Markets

“Socially Responsible Firms,” with Hao Liang and Luc Renneboog, 122 *Journal of Financial Economics* 586-606 (2016) (winner of Moskowitz Prize for outstanding quantitative research)

“Price Impact, Materiality, and *Halliburton II*” with Drew Roper, 93 *Washington University Law Review* 553 (2016)

“Introducing the CFGM Corporate Governance Database: Variable Construction and Comparison to the RiskMetrics and IRRC Governance Databases” with Martijn Cremers, Paul Gompers and Andrew Metrick, Working Paper

“The Benefits and Costs of Indices in Empirical Corporate Governance Research,” in OXFORD HANDBOOK ON CORPORATE LAW AND GOVERNANCE (2016)

“Thirty Years of Shareholder Rights and Stock Returns,” with Martijn Cremers, *revise and resubmit Journal of Financial Economics*

“Thirty Years of Shareholder Rights and Firm Valuation,” with Martijn Cremers, 69 *Journal of Finance* 1167 (2014)

“Rethinking Basic,” with Lucian Bebchuk, 69 *Business Lawyer* 671 (2014)

“Calculating Damages in ERISA Litigation,” with Atanu Saha, 1 *Journal of Financial Perspectives* 93 (2013)

“Forward-casting 10b-5 Damages: A Comparison to other Methods”, with Atanu Saha, 37 *Journal of Corporation Law* 365 (2011)

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“Legal and Economic Issues in Litigation arising from the 2007-2008 Credit Crisis,” with Jennifer Bethel and Gang Hu, in PRUDENT LENDING RESTORED: SECURITIZATION AFTER THE MORTGAGE MELTDOWN (2009)

“Securities Litigation and the Housing Market Downturn,” with Atanu Saha, 35 *Journal of Corporation Law* 97 (2009)

“The Supreme Court’s 2005-2008 Securities Law Trio: *Dura Pharmaceuticals, Tellabs, and Stoneridge*,” 9 *Engage* 32 (2009)

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“Do Exchanges, CCPs, and CSDs have Market Power?,” in GOVERNANCE OF FINANCIAL MARKET INFRASTRUCTURE INSTITUTIONS (Ruben Lee) (2009)

“An Asymmetric Payoff-Based Explanation of IPO ‘Underpricing’,” Working Paper, with Atanu Saha (2008)

“The Law and Finance of Broker-Dealer Mark-Ups,” commissioned study for NASD using proprietary database (2008)

“Majority Voting” in REPORT OF THE COMMITTEE ON CAPITAL MARKETS REGULATION (2008)

“The Loss Causation Requirement for Rule 10B-5 Causes of Action: The Implications of *Dura Pharmaceuticals v. Broudo*,” with Atanu Saha, 63 *BUSINESS LAWYER* 163 (2007)

“Mandated Disclosure and Stock Returns: Evidence from the Over-the-Counter Market,” 36 *Journal of Legal Studies* 1 (June, 2007)

“Policy Issues Raised by Structured Products,” with Jennifer Bethel, in BROOKINGS –NOMURA PAPERS IN FINANCIAL SERVICES (2007)

“The Case for Mandatory Disclosure in Securities Regulation around the World,” 2 *Brooklyn Journal of Business Law* 81 (2007)

“U.S. Securities Regulation in a World of Global Exchanges,” with Reena Aggarwal and Jonathan Katz, *in EXCHANGES: CHALLENGES AND IMPLICATIONS* (2007)

“Shareholder Rights” *in REPORT OF THE COMMITTEE ON CAPITAL MARKETS REGULATION* (2007)

“Creditor Rights: A U.S. Perspective,” 22 *Angler- und Glaubigerschutz bei Handelsgesellschaften* 49 (2006)

“Measuring the Effects of Mandated Disclosure,” 1 *Berkeley Business Law Journal* 369 (2004)

“If We Understand the Mechanisms, Why Don’t We Understand the Output?”, 37 *Journal of Corporation Law* 503 (2003)

“Why European Takeover Law Matters,” *in REFORMING COMPANY AND TAKEOVER LAW IN EUROPE* (2003)

“Does the Evidence Favor State Competition in Corporate Law?”, with Alma Cohen & Lucian Bebchuk, 90 *California L. Rev.* 1775 (2002)

“Corporate Charitable Giving,” with Victor Brudney, 69 *Univ. Of Chicago Law Review* 1191 (2002)

“A Comment on Electronic versus Floor-Based Securities Trading,” *Journal of Institutional and Theoretical Economics* (Spring 2002)

“Much Ado About Order Flow,” *Regulation Magazine* (Spring 2002)

“On Takeover Law and Regulatory Competition,” with Lucian Bebchuk, 57 *Business Lawyer* 1047 (2002)

“Federal Intervention to Enhance Shareholder Choice,” with Lucian Bebchuk, 87 *Virginia Law Review* 993 (2001)

“A New Approach to Regulatory Competition in Takeover Law,” with Lucian Bebchuk, 87 *Virginia Law Review* 111 (2001)

“A Proposal for Solving the ‘Payment for Order Flow’ Problem,” 74 *Southern California Law Review* 1027 (2001)

“Federalism and Takeover Law: The Race to Protect Managers from Takeovers,” with Lucian Bebchuk, 99 *Columbia L. Rev.* 1168 (1999)

TESTIMONY LAST FOUR YEARS

Bradley Cooper v. Thoratec Corporation et al., Case No. 4:14-cv-00360-CW, Expert report and deposition on April 11, 2018

Blattman v. C3, Inc. et al., Case No. 1:15-cv-00530-GMS, Expert report and deposition on December 22, 2017

United States v. Kaleil Tuzman, 15 Criminal Case No. 536 (US Attorney for the Southern District of New York), testimony on December 15 and 18, 2017

United States v. Brian Block, 16 Criminal Case No. 595 (US Attorney for the Southern District of New York), testimony on June 13, 2017

In re Alere-Abbott Merger Litigation, Case No. 12963-VCG, Expert report and deposition on April 7, 2017

Beaver County Employees' Retirement Fund, et al., Case No. 0:14-cv-007856-ADM-TNL, Expert report and deposition on September 16, 2016

In re Aeropostale, Inc., et al., Case No. 16-11275, Expert report and trial testimony in U.S. Bankruptcy Court, Southern District of New York, August 17, 2016 and deposition on August 14, 2016

Jaffe v. Household International, Inc., Civil Action 02-C-5893, Expert report and depositions on May 27, 2016 and February 27, 2016

Better & YRC Investors v. YRC Worldwide, Civil Action No. 11-CV-2072, Expert report and deposition on March 8, 2016

David Kaplan et al v. S.A.C. Capital Advisors, L.P., Civil Action No. 12-CV-9350, Expert report and deposition on March 3, 2016

In re Genworth Financial Inc. Securities Litigation, Civil Action No. 3:14-CV-682, Expert report and deposition on February 2, 2016

Fosbre v. Las Vegas Sands Corp., Case No. 2:10-cv-00765-APG-GWF, Expert report and deposition on December 11, 2015 and March 25, 2015

Ambac Assurance v. JPMorgan Investment Management Inc. & Assured Guaranty v. JP Morgan Investment Management, Inc., Civil Index No. 603755/2008, Expert report and deposition on December 2, 2015

In re Barrick Gold Securities, Case No. 1:13-CV-03851, Expert report and deposition on November 23, 2015

In re Puda Coal Securities Inc. Litigation et al., Case No. 1:11-CV-2598, Expert report and deposition on July 29, 2015

City of Lakeland Employees Pension Plan v. Baxter International, Inc., et al., Case No. 1:10-cv-06016, Expert report and deposition on June 3, 2015 and October 17, 2014

Bruce Sherman v. Bear Stearns Companies Inc., et al, Case No. 08 MDL No. 1963, Expert report and deposition on May 28, 2015

Louisiana Municipal Police Employees Retirement System v. Simon Property Group, Inc., Case No. 7764-CS, Expert report and deposition on July 7, 2014

In re Lehman Brothers Securities and ERISA Litigation, Case No. 09 MD 2017, Expert report and deposition on April 24, 2014

EXHIBIT B

to the Ferrell Report

Maiden Capital Trading on Maiden and Melley Identified Dates

Date	Maiden Capital	Maiden Capital	Maiden Capital	Statistically Significant	
	Buy Volume	Sell Volume	Net Volume	T-Stat	Stock Price Increase?
1/22/2009	3,166	(29)	3,137	-0.41	NO
3/9/2009	28,571	(28,571)	0	0.04	NO
3/10/2009	200	(209)	(9)	1.16	NO
3/17/2009	3,490	0	3,490	0.10	NO
3/24/2009	9,700	0	9,700	-0.85	NO
3/27/2009	14,100	0	14,100	-0.43	NO
4/3/2009	21,000	0	21,000	-0.26	NO
4/8/2009	17,029	(2,900)	14,129	-0.12	NO
5/21/2009	100	0	100	0.04	NO
5/22/2009	700	0	700	-0.13	NO
6/8/2009	700	(2,000)	(1,300)	-0.37	NO
6/12/2009	200	0	200	-0.19	NO
6/22/2009	200	0	200	-0.09	NO
7/9/2009	1,200	0	1,200	-0.93	NO
7/10/2009	100	0	100	1.02	NO
8/13/2009	100	(100)	0	0.91	NO
9/3/2009	6,200	(200)	6,000	0.02	NO
12/4/2009	10,700	(10,600)	100	0.06	NO
7/29/2010	35,700	(35,760)	(60)	-0.58	NO
3/18/2011	600	(600)	0	-0.75	NO
9/8/2011	1,950	(1,950)	0	-0.11	NO

Sources: Trial Transcript of S. Maiden and P. Melley Testimony; KIT Ex. 3937, GX 411, GX 411-A, GX 412; GX 3810, GX 3831, GX 3813, GX 3814, GX 3816, GX 1529, GX 1540, GX 1549, GX 1556, GX 1564, GX 1574, GX 1575, GX 1582, GX 1595, GX 1597, GX 1598, GX 1603, GX 1614, GX 1615.

KIT EXHIBIT

3922

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EXHIBIT C

to the Ferrell Report

